

IOWA Department of REVENUE

Iowa Leading Indicators Index November 2012 Report

Tax Research and Program Analysis Section
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The Iowa Leading Indicators Index (ILII) held steady at 106.0 (100=1999) in November 2012 from 106.0 in October after six months of consecutive increases. The Iowa non-farm employment coincident index recorded a 0.07 percent rise in November, which extends the streak of employment gains to twenty-six consecutive months.

The ILII's value did not change in November after a 0.1 percent increase in October and a 0.3 percent increase in September. During the six-month span through November, the ILII increased 0.9 percent (an annualized rate of 1.8 percent). The six-month diffusion index was 62.5 with five of the eight components (average weekly manufacturing hours, residential building permits, the new orders index, average weekly unemployment claims, diesel fuel consumption, and the Iowa stock market index) experiencing an increase of more than 0.05 percent over the last half a year.

In November, two of eight Iowa Leading Indicators Index components contributed positively. The positive contributors were residential building permits and average weekly unemployment claims (inverted). The new orders index, the agricultural futures profits index, the national yield spread, average weekly manufacturing hours, diesel fuel consumption, and the Iowa stock market index all contributed to the index negatively.

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999–November 2012

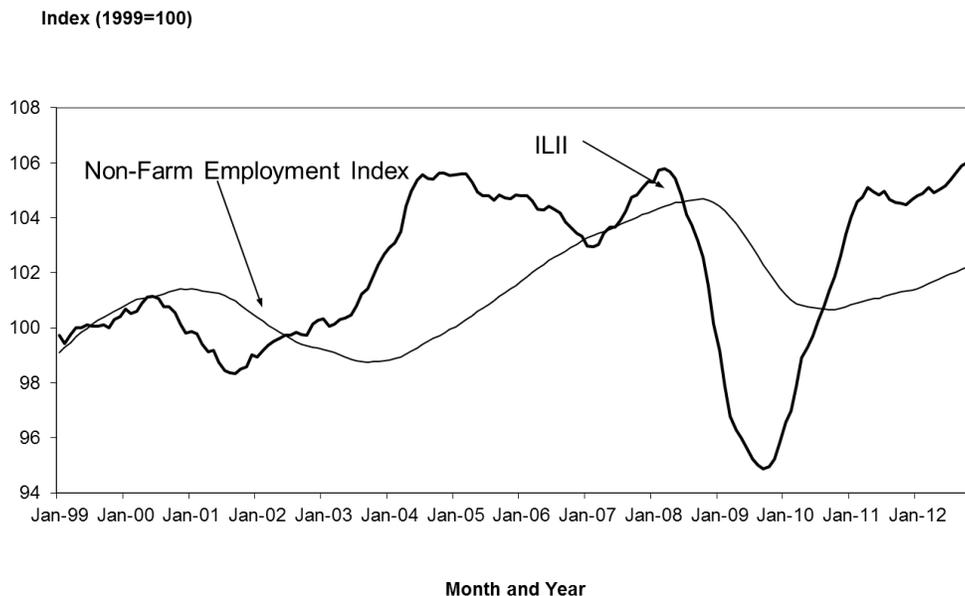


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2012					
	June	July	August	September	October	November
ILII	105.1	105.4	105.6	105.9	106.0	106.0
Percentage Change ^a	0.1%	0.2%	0.2%	0.3%	0.1%	0.0%
Diffusion Index ^b	62.5	75.0	75.0	75.0	31.3	25.0
Six-Month Values	Dec to June	Jan to July	Feb to August	March to Sept	April to October	May to November
ILII						
Percentage Change	0.5%	0.6%	0.7%	0.8%	1.1%	0.9%
Annualized Percentage Change	0.9%	1.1%	1.4%	1.5%	2.1%	1.8%
Diffusion Index	50.0	62.5	75.0	75.0	75.0	62.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 28, 2012.

a. Percentage changes in the ILII do not always equal changes in the level of the ILII due to rounding.

b. A diffusion index measures the proportion of components that are rising based on the actual changes (not the standardized contributions to the ILII). Components experiencing increases greater than 0.05 percent are assigned a value of 1.0, components that experience changes less than an absolute value of 0.05 percent are assigned a value of 0.5, and components experiencing decreases greater than 0.05 percent are assigned a value of 0.0.

Table 2. Iowa Leading Indicators Index Components: Six Month Overview

Component Series Monthly Values ^a		2012					
		June	July	August	September	October	November
AFPI ^b	↓ ^c						
Corn Profits (cents per bushel)		291.0	295.2	298.8	299.5	305.8	311.7
Soybean Profits (cents per bushel)		491.9	502.4	520.1	541.1	561.3	572.4
Hog Profits (cents per pound)		24.1	24.0	22.7	21.2	19.8	18.6
Cattle Profits (cents per pound)		-4.5	-5.2	-6.0	-7.1	-8.2	-9.2
Iowa Stock Market Index (10=1984-86)	↓	70.94	74.07	75.31	77.33	76.00	72.97
Yield Spread (10-year less 3-month)	↓	1.53	1.43	1.58	1.61	1.65	1.56
Residential Building Permits	↑	679	702	721	753	795	826
Average Weekly Unemployment Claims ^d	↑	3,460	3,421	3,398	3,381	3,389	3,357
Average Weekly Manufacturing Hours	↓	40.9	40.9	40.8	40.8	40.8	40.8
New Orders Index (percent)	↓	65.0	65.4	66.6	67.2	67.4	67.2
Diesel Fuel Consumption (mil gallons)	↓	55.00	54.99	55.05	55.12	55.01	54.89

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 28, 2012.

a. For all component series except for the yield spread and the Iowa stock market index, the values represent 12-month backward moving averages.

b. The agricultural futures profits index is computed as the sum of the standardized symmetric percent changes in the four series, each weighted by the commodity's annual share of Iowa cash farm income (updated August 28, 2012).

c. Arrows indicate the direction of the series' contribution to the ILII for the latest month.

d. Changes in average weekly initial unemployment insurance claims are inverted when added to the ILII, thus a negative change in the series contributes positively to the index.

ILII Components

- **Residential building permits:** Number of total permits issued in Iowa for the construction of residential housing units. Changes are calculated based on a 12-month moving average. For November, this component contributed 0.14 to the ILII with the 12-month moving average increasing to 826. November 2012 permits were 63.2 percent above the number of permits issued in November 2011, but 10.8 percent below the historical average for November (1998-2008).
- **Average weekly unemployment claims:** Weekly average of initial claims for unemployment insurance in Iowa. Changes are calculated based on a 12-month moving average and are inverted when added to the ILII. This component contributed 0.03 to the ILII value. The 12-month moving average of claims fell to 3,357 with unemployment claims for the month 8.3 percent below November 2011 claims, but 6.9 percent above average historical claims for November (1987-2008).
- **New orders index:** Diffusion index measuring the share of purchasing managers in Iowa reporting increases in orders received for manufacturing output. Changes are calculated based on a 12-month moving average. In November, the monthly value of the index fell from 57.1 in October to 53.5; it was also below the value of 55.5 from a year ago. The 12-month moving average of the new orders index fell to 67.2, contributing -0.01 to the ILII.
- **Agricultural futures profits index:** Composite measure of corn, soybean, hog, and cattle expected profits, measured as the futures price less estimated breakeven costs, weighted by the respective share of Iowa annual cash receipts. Changes are calculated based on a 12-month moving average. During November, this component contributed -0.02 to the ILII value. Expected profits rose for both grains but fell for both livestock components. Compared to last year, corn prices are up 18.0 percent and soybean prices are up 18.4 percent, increasing expected profitability for both in November. Cattle prices are up 3.3 percent over last year, but that increase was not enough to offset higher production costs. Hog prices decreased 7.0 percent over last year and expected profitability fell.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During November, the yield spread fell to 1.56 percent as the long-term rate fell 10 basis points and the short-term rate fell 1 basis point. For the month, the yield spread contributed -0.03 to the ILII.
- **Average weekly manufacturing hours:** Weekly average of hours worked in the manufacturing sector in Iowa. Changes are calculated based on a 12-month moving average. For November 2012, this component contributed -0.03 to the ILII value despite the value holding steady at 40.8 for the fourth consecutive month due to rounding. November 2012 hours were 41.1 compared to 41.7 hours in November 2011.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. Diesel fuel consumption decreased 2.3 percent between November 2011 and 2012, causing the 12-month moving average to fall to 54.89 million gallons from 55.01 in October, and contributing -0.04 to the ILII value.
- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. During November 2012, only 11 of the 34 companies gained value, including only 1 of the 11 financial-sector companies. The stock market index fell to 72.97, contributing -0.07 to the ILII value.

Table 3. ILII Components and Standardization Factors for FY 2013

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.049
Iowa Stock Market Index	0.018
Yield Spread	0.328
Building Permits	0.036
Average Weekly Unemployment Claims	0.033
Average Weekly Manufacturing Hours	0.284
New Orders Index	0.063
Diesel Fuel Consumption	0.188

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 28, 2012
The standardization factors are the inverse of the standard deviation of the month-to-month changes in each component over the January 1999 to June 2012 period. These factors equalize the volatility of the contribution from each component and are normalized to one. The month-to-month changes are based on 12-month backward moving averages for all components except the yield spread and the Iowa stock market index. The yield spread and new orders index changes are simple arithmetic changes; month-to-month changes for the rest of the components are computed as symmetric percentage changes. The factors are updated annually during August.

Comments

The Iowa Leading Indicators Index (ILII) is designed to forecast the future direction of economic activity in the state of Iowa. The techniques used to build the ILII follow those used by The Conference Board to construct the national Leading Economics Index (LEI) prior to the 2001 revisions. A one-month movement in such an index does not produce a clear signal, rather it is necessary to consider the direction of the index over several consecutive months. A contraction signal in the ILII is considered reliable when two conditions are met: 1. The index declines by at least two percent over a six month period (using an annualized rate); and, 2. A majority of the individual components decline over those six months (the six-month diffusion index less than 50.0).

The Iowa non-farm employment coincident index measures the change in non-seasonally adjusted, total non-farm employment in the state of Iowa. Changes are based on a 12-month moving average of employment and are computed as symmetric percentage changes. The index is a representation of overall economic activity in Iowa.

The employment index and the ILII are constructed to have a value of 100 in the year 1999.

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